



U.S. DEPARTMENT OF ENERGY
Office of Electricity Delivery and Energy Reliability
Infrastructure Security and Energy Restoration

ENERGY ASSURANCE DAILY

Wednesday Evening, July 06, 2016

Major Developments

Severe Storms Knock Out Power to Over 373,000 Customers in Midwest July 5–6

A major line of thunderstorms moved across the upper Midwest on Tuesday evening into Wednesday, knocking out power to at least 373,171 customers. Wind gusts of up to 70 mph were reported, causing extensive damage to utilities' infrastructure. As of 3:30 p.m. EDT Wednesday, 58,446 customers remained without power. Xcel Energy, the hardest hit utility with 250,000 customer outages in Minnesota, said due to the extensive damage to the power grid, customers will experience an extended, multiple day outage. ComEd, which reported 55,000 customer outages in Illinois, expects the vast majority of customers to be restored by 11:00 p.m. CDT Wednesday evening. Madison Gas & Electric, which reported 17,000 customer outages in Wisconsin, said power restoration would continue through at least Thursday. The table below shows total affected customers and the latest reported outages by utility. The "Affected" column shows the total count of customers that lost power at one point or another over the course of the storm for each utility. These outages may not have occurred concurrently and are not the same as peak outages.

| Midwest Customer Power Outages | | | |
|--|-------|----------------|-----------------|
| July 5 – 6, 2016 | | | |
| Electric Utility | State | Affected | Latest Reported |
| MidAmerican Energy | IA | 4,435 | 942 |
| ComEd | IL | 55,000 | 59 |
| Ameren Illinois | IL | 3,496 | 932 |
| Duke Energy | IN | 8,679 | 2,482 |
| NIPSCO | IN | 2,271 | 127 |
| Xcel | MN | 250,000 | 48,428 |
| Wright-Hennepin Cooperative Electric Assn. | MN | 10,000 | 407 |
| Lake Country Power | MN | 6,300 | 954 |
| Minnesota Power | MN | 2,300 | 1,285 |
| KCP&L | MO | 2,519 | 68 |
| Madison Gas & Electric | WI | 17,000 | 1,909 |
| Alliant Energy | WI | 9,919 | 6 |
| Xcel | WI | 1,252 | 847 |
| TOTAL * | | 373,171 | 58,446 |

*Total outages represent only electric utilities listed in this table.

Sources:

<https://outagemap.comed.com/>

<https://www.midamericanenergy.com/OutageWatch/dsk.html>

<http://outagemap.duke-energy.com/in/default.html>

<http://apps.ameren.com/outage/OutageMap.aspx?state=IL>

https://www.xcelenergy.com/emergency_notices/severe_weather_impacting_minnesota

<http://www.outagemap-xcelenergy.com/outagemap/?state=MN#>

<http://outage.whe.org/>

<https://www.comed.com/Outages/StormCenter/Pages/CurrentStormInformation.aspx>

https://twitter.com/Wright_Hennepin

<https://www.facebook.com/lakecountrypower>

<http://outagemap.mnpower.com/external/default.html>

<https://www.mge.com/storm-info.htm>

<https://www.mge.com/safety-outages/power-outages/outage-map/index.htm>

<http://www.alliantenergy.com/CustomerService/StormandOutageCenter/OutageSummary/index.htm>

<https://twitter.com/AlliantEnergyWI>
<http://www.kare11.com/weather/130k-xcel-energy-customers-without-power/264937755>
<http://wgntv.com/2016/07/06/storm-related-incidents-in-oak-lawn-and-evanston-15k-power-outages/>
<http://www.kwwl.com/story/32381816/2016/07/06/storm-damage-and-power-outages-from-overnight-storm>
<http://www.wkow.com/story/32380139/2016/07/06/mge-alliant-report-major-outages-during-storm>

Electricity

Storms Knock Out Power to 60,000 Georgia Power Customers in Georgia July 6

Strong storms producing high winds and lightning knocked out power to at least 60,000 Georgia Power customers around the Atlanta metro area on Wednesday afternoon. Winds up to 50 mph were reported, downing trees and power lines. As of 4:00 p.m. EDT Wednesday, 18,420 customers remained without power.

https://twitter.com/georgiapower?WT.svl=tw3&hp=rfy_twitter

http://outagemap.georgiapower.com/external/default.html?hp=tm_po_view_outage_map

Entergy's 1,299 MW Indian Point Unit 2 in New York Automatically Shuts during Testing July 6 – Officials

Officials on Wednesday said unit 2 at Entergy's Indian Point nuclear plant automatically shut down during testing of electrical systems. The cause of Wednesday morning's shutdown was being investigated but Entergy said the shutdown occurred as workers were testing electrical systems that are designed to automatically shut down the reactor if needed. It says no radioactivity was released and public safety was not affected. The company said unit 3 remains in operation.

Reuters, 1:17 July 6, 2016

Indiana Michigan Power's 1,060 MW D.C. Cook Nuclear Unit 2 in Michigan Shut July 6

Indiana Michigan Power reported unit 2 was taken offline at 12:38 a.m. EDT Wednesday when an expansion joint bellows on a Moisture Separator Reheater ruptured. The component provides non-radioactive steam to the low pressure turbines. The expansion joint bellows is roughly 48 inches in diameter. The rupture released pressurized, high-temperature steam to the surrounding area, causing damage to an adjacent Turbine Building exterior wall. There were no injuries and unit 1 remains at 100 percent power. An Unusual Event (UE) was declared at 12:50 a.m. due to the unanticipated event, and was terminated at 2:07 a.m. During the manual shutdown by operators there were no complications and all equipment responded appropriately. Causal analysis and repair estimates are under development. AEP does not release return-to-service information for generation units.

<https://www.indianamichiganpower.com/info/news/viewRelease.aspx?releaseID=2021>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

<http://www.nrc.gov/reading-rm/doc-collections/event-status/event/2016/20160706en.html>

GRDA's 1,134 MW Chouteau Coal-fired Power Plant in Oklahoma Remains Offline July 6 Due to Lightning Strike, Fire July 1

The Grand River Dam Authority (GRDA) on Wednesday said its Chouteau power generation plant in Oklahoma was offline after a lightning strike caused a fire in unit 2 on Friday evening. A GRDA spokesman said the lightning strike shut down a pump, which cools one of the plant's two turbines. Workers attempted to restart the pump but failed and the turbine in unit 2 overheated and started a fire. Unit 1, on Tuesday, was still being inspected for damage and had not been restarted. GRDA said none of its electricity customers experienced outages due to the fire and other power plants in the region will take up the load while this station is offline.

<http://www.grda.com/thankful-for-employee-safety-help-from-surrounding-communities/>

<https://www.facebook.com/grandriverdamauthority/>

<http://www.newson6.com/story/32374943/chouteau-power-plant-offline-after-fire>

Wolf Creek's 1,165 MW Nuclear Unit 1 in Kansas Reduced to 68 Percent by July 6

On the morning of July 5 the unit was operating at full power.

<http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/2016/>

Update: AES's 175 MW Redondo Gas-fired Unit 6 in California Returns to Service by July 5

The unit returned from an unplanned outage that began on July 3.

<http://content.caiso.com/unitstatus/data/unitstatus201607051515.html>

Pattern Development Acquires Development Rights to 600 MW King Pine Wind Power Project in Maine July 6

Pattern Energy Group LP on Wednesday announced it acquired from SunEdison the development rights to the proposed 600 MW King Pine Wind power project, currently under development in northeastern Maine. The project will utilize 174 turbines and will interconnect to ISO New England at Emera Maine's proposed 345 kV Hammond substation. King Pine Wind is expected to begin full construction in 2018 and reach commercial operation in 2020. <http://www.prnewswire.com/news-releases/pattern-development-acquires-the-development-rights-to-the-600-mw-king-pine-wind-power-project-in-maine-300294397.html>

North Dakota PUC Approves Brady Wind's 150 MW Proposed Wind Farm July 6

The North Dakota Public Service Commission (PSC) on Wednesday approved a siting permit for the Brady II Wind Energy Center in Hettinger and Stark Counties. The permit approved is for Brady Wind II, LLC (a wholly-owned, indirect subsidiary of NextEra Energy Resources), to construct and operate the Brady II Wind Energy Center and associated facilities. The wind farm will have a capacity of approximately 150 MW and will consist of up to 72 wind turbines. All wind turbines are proposed to be located in Hettinger County. Facilities located in Stark County include underground electrical collection systems and cables.

<http://www.psc.nd.gov/public/newsroom/2016/7-6-16BradyIWindApproval.pdf>

Southern Company Subsidiary Acquires 102 MW Henrietta Solar Project in California July 6

Southern Company subsidiary Southern Power and SunPower Corp. on Wednesday announced that Southern Power acquired a controlling interest in the 102 MW Henrietta Solar Project in Kings County, California, from SunPower, which will own the remaining interest in the project. Construction began in May 2015 and the project is expected to be fully operational in the third quarter of this year.

<http://www.southerncompany.com/news/iframe-pressroom.cshtml>

Petroleum

Production Cut at Delta's 185,000 b/d Trainer, PES' 335,000 b/d Philadelphia Refineries in Pennsylvania July 5 as Gasoline Margins Fall – Source

Philadelphia Energy Solutions (PES) on Tuesday night reduced output by 10 percent at the Point Breeze section of its Philadelphia, Pennsylvania refinery complex, a source told Reuters on Wednesday. On Tuesday, a source said Delta Air Lines cut production rates by roughly 16 percent at its Philadelphia-area refinery. Delta has since restored roughly 10,000 b/d of the cuts related to operations, a source said Wednesday, but the plant is still running about 11 percent short of capacity. Gasoline margins have fallen more than 30 percent in the past eight trading sessions to February lows. Additionally, Phillips 66 cut production by roughly 6,000 b/d in the 135,000 b/d fluid catalytic cracking unit at its 238,000 b/d Bayway refinery in Linden, New Jersey, a source told Reuters on Wednesday, but the source said the reduction is not believed to be related to poor margins.

Reuters, 11:42 July 6, 2016

Valero Continues Reformer Restart at Its 190,000 b/d Memphis, Tennessee Refinery July 6 – Sources

Valero Energy Corp's Memphis, Tennessee, refinery was continuing the restart of a reforming unit on Wednesday after completing repairs to stop a leak, sources familiar with plant operations said. The reformer is expected to return to production on Thursday. The refinery's production remains at 60 percent of capacity while the 36,000 b/d continuous catalytic regeneration reformer remains out of production, the sources said. The reformer was shut on June 23 and repairs were performed last week on the unit to stop a leak.

Reuters, 2:22 July 6, 2016

PBF Restoring FCCU Operations to Normal at Its 192,500 b/d Chalmette, Louisiana Refinery – Sources

PBF Energy was restoring the fluidic catalytic cracking unit (FCCU) to normal operations at its Chalmette, Louisiana refinery on Wednesday, one day after the unit fell out of production, sources familiar with plant operations said. The 68,000 b/d FCCU was expected to be back in production by Thursday, the sources said, following the repair of a failed valve.

Reuters, 2:08 July 6, 2016

Update: LyondellBasell Plans Coker Restart at Its 263,776 b/d Houston, Texas Refinery Late This Week – Gulf Coast Sources

LyondellBasell Industries plans to restart late this week the small coking unit at its Houston, Texas refinery, Gulf Coast market sources said on Tuesday. Lyondell had planned to restart the unit by June 30. The 42,000 b/d coker has been shut since an April 8 fire, which led to extensive repairs of piping on the unit, the sources said. The company had shifted workers last week at the refinery in a push to restart the unit last weekend, but the need to avoid heat stress injuries to contractors and employees completing repairs slowed the work.

Reuters, 5:54 July 5, 2016

Phillips 66 Reports FCCU Work at Its 247,000 b/d Sweeny, Texas Refinery July 5

Phillips 66 reported work on the fluid catalytic cracking unit (FCCU) at its Sweeny, Texas refinery, according to a filing with the Texas Commission on Environmental Quality.

Reuters, 1:12 July 5, 2016

U.S. Crude Oil Exports Hit Record 662,000 b/d in May – Census Bureau

U.S. crude oil exports rose to a record 662,000 b/d day in May, up from 591,000 b/d in April, foreign trade data from the U.S. Census Bureau showed on Wednesday. Canada accounted for the most U.S. crude exports at 308,000 b/d. The total export figure was the highest on record since at least 1920, according to U.S. government data.

Reuters, 10:05 July 6, 2016

Natural Gas

Update: Enterprise's 1.5 Bcf/d Natural Gas Plant in Pascagoula, Mississippi Remains Shut July 6 after Explosions, Fire June 27

Enterprise Products Partners' Pascagoula plant remains unable to process natural gas after a fire at the facility on June 27, Destin Pipeline Co LLC told its shippers in a notice Wednesday. Enterprise has not said when Pascagoula will return to service, Destin reported. Without access to the processing facility, Destin said it remains unable to provide gas transportation service from its offshore receipt points to Pascagoula and continues to offer an alternate delivery option for offshore gas transportation to the Viosca Knoll Gathering system (VKGS). Destin warned, however, that flows to VKGS could only continue for another six to 11 days because it cannot deliver condensate to VKGS. Condensate must be stored in Destin's 36-inch main line, which can only hold about 16,000 barrels. Total gas flows from the MP260 platform are limited to 305 MMcf/d due to operational issues, but Destin said it may soon be able to increase flows to 350 MMcf/d. Destin said it is considering other options to transport gas, including piping modifications at MP260 that, if implemented, may require a total shut down of all offshore flow for about two days around July 15-16. The modification could enter service around July 23. Other options include reversing flows from Destin's 24-inch lateral to Williams' MP261 platform to the Transco system, and from Destin VK900 point into the High Point system. Destin declared force majeure on June 28 due to Enterprise's inability to process gas at the plant. The 225-mile Destin gas pipeline system can carry 1.2 Bcf/d from offshore producers to the Pascagoula plant, and then further north to interconnections with six major interstate gas transmission lines. The Viosca Knoll Gathering system is capable of delivering approximately 600 MMcf/d of gas per day into the facilities of a number of major onshore interstate pipelines including Tennessee Gas Pipeline, Columbia Gulf Transmission, Southern Natural Gas, Transcontinental Gas Pipe Line, and Destin Pipeline Company. Additionally, LLOG said its Delta House floating production system, which was shut after the fire, was flowing at this time. The Delta House system, which is located in the Mississippi Canyon field, has a production handling capacity of 240 MMcf/d of natural gas and 100,000 b/d of crude oil, with initial production established during the second quarter of 2015.

<https://bp.trellisenergy.com/ptms/public/infopost/viewNotices.do?noticeCategoryId=308201&tspId=1&proxyTspId=1&menuId=menu-info-posting-notices-critical>

Reuters, 2:20 July 6, 2016

Regency Reports AGI Compressor Shut at Its 290 MMcf/d Waha Gas Plant in Texas July 5

Regency reported the acid gas injector (AGI) compressor shut on high third stage suction pressure while draining the scrubbers. The scrubbers were drained and the AGI compressor was reset and restarted.

<http://www2.tceq.texas.gov/oce/eeq/index.cfm?fuseaction=main.getDetails&target=236856>

Other News

Nothing to report.

International News

Nothing to report.

Energy Prices

| U.S. Oil and Gas Prices | | | |
|--|-------|----------|----------|
| July 6, 2016 | | | |
| | Today | Week Ago | Year Ago |
| CRUDE OIL West Texas Intermediate U.S. \$/Barrel | 47.32 | 47.38 | 54.08 |
| NATURAL GAS Henry Hub \$/Million Btu | 2.82 | 2.76 | 2.79 |

Source: Reuters

Links

This Week in Petroleum from the U.S. Energy Information Administration (EIA)

<http://www.eia.gov/oog/info/twip/twip.asp>

Updated every Wednesday.

Weekly Petroleum Status Report from EIA

http://www.eia.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html

Updated after 10:30 AM & 1:00 PM ET every Wednesday.

Natural Gas Weekly Update from EIA

<http://www.eia.gov/oog/info/ngw/ngupdate.asp>

Updated after 2:00 PM ET every Thursday.

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